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OMB Approval Number: 2050-0095
Approved for Use Through: 4/95

# PA-Score

## PA ScoreSheets

Site Name: HUMMEL CHEMICAL
CERCLIS ID No.: NJD002174712
Street Address: 185 FOUNDRY STREET
City/State/Zip: NEWARK, NJ

Investigator: DENNIS J. FOERTER, CHMM
Agency/Organization: U.S.EPA/ROY F. WESTON, INC.
Street Address: RARITAN PLAZA I - 4TH FLOOR
City/State: EDISON, NJ

Date: 7-28-94

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## WASTE CHARACTERISTICS

Waste Characteristics (WC) Calculations:

| | | | | |
|---|---|---|---|---|
| 1 | CONTAMINATED SOIL | Contaminated soil | WQ value | maximum |
| | Area | 1.00E+00 sq ft | 2.94E-05 | 2.94E-05 |

** Only First WC Page Is Printed ** | Waste Characteristics Score: WC = 18

| Ground Water Pathway Criteria List<br>Suspected Release | |
|---|---|
| Are sources poorly contained? (y/n/u) | Y |
| Is the source a type likely to contribute to ground water contamination (e.g., wet lagoon)? (y/n/u) | N |
| Is waste quantity particularly large? (y/n/u) | U |
| Is precipitation heavy? (y/n/u) | N |
| Is the infiltration rate high? (y/n/u) | N |
| Is the site located in an area of karst terrain? (y/n) | N |
| Is the subsurface highly permeable or conductive? (y/n/u) | N |
| Is drinking water drawn from a shallow aquifer? (y/n/u) | N |
| Are suspected contaminants highly mobile in ground water? (y/n/u) | N |
| Does analytical or circumstantial evidence suggest ground water contamination? (y/n/u) | N |
| Other criteria? (y/n) | N |
| SUSPECTED RELEASE? (y/n) | N |

Summarize the rationale for Suspected Release:

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## Ground Water Pathway Criteria List
## Primary Targets

| | |
|---|---|
| Is any drinking water well nearby? (y/n/u) | N |
| Has any nearby drinking water well been closed? (y/n/u) | N |
| Has any nearby drinking water well user reported foul-testing or foul-smelling water? (y/n/u) | N |
| Does any nearby well have a large drawdown/high production rate? (y/n/u) | N |
| Is any drinking water well located between the site and other wells that are suspected to be exposed to a hazardous substance? (y/n/u) | N |
| Does analytical or circumstantial evidence suggest contamination at a drinking water well? (y/n/u) | N |
| Does any drinking water well warrant sampling? (y/n/u) | N |

Other criteria? (y/n) N

PRIMARY TARGET(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Targets:

## GROUND WATER PATHWAY SCORESHEETS

Pathway Characteristics

| | | Ref. |
|---|---|---|
| Do you suspect a release? (y/n) | No | |
| Is the site located in karst terrain? (y/n) | No | |
| Depth to aquifer (feet): | 65 | |
| Distance to the nearest drinking water well (feet): | 21120 | |

| LIKELIHOOD OF RELEASE | Suspected Release | No Suspected Release | References |
|---|---|---|---|
| 1. SUSPECTED RELEASE | 0 | | |
| 2. NO SUSPECTED RELEASE | | 500 | |
| LR = | 0 | 500 | |

Targets

| TARGETS | Suspected Release | No Suspected Release | References |
|---|---|---|---|
| 3. PRIMARY TARGET POPULATION 0 person(s) | 0 | | |
| 4. SECONDARY TARGET POPULATION Are any wells part of a blended system? (y/n) N | 0 | 0 | |
| 5. NEAREST WELL | 0 | 0 | |
| 6. WELLHEAD PROTECTION AREA None within 4 Miles | 0 | 0 | |
| 7. RESOURCES | 0 | 5 | |
| T = | 0 | 5 | |

WASTE CHARACTERISTICS

| | | |
|---|---|---|
| WC = | 0 | 18 |

| | |
|---|---|
| GROUND WATER PATHWAY SCORE: | 1 |

Ground Water Target Populations

| Primary Target Population Drinking Water Well ID | Dist. (miles) | Population Served | Reference | Value |
|---|---|---|---|---|
| None | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| *** Note : Maximum of 5 Wells Are Printed *** | | | Total | |

| Secondary Target Population Distance Categories | Population Served | Reference | Value |
|---|---|---|---|
| 0 to 1/4 mile | 0 | | 0 |
| Greater than 1/4 to 1/2 mile | 0 | | 0 |
| Greater than 1/2 to 1 mile | 0 | | 0 |
| Greater than 1 to 2 miles | 0 | | 0 |
| Greater than 2 to 3 miles | 0 | | 0 |
| Greater than 3 to 4 miles | 0 | | 0 |
| | | Total | 0 |

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***Apportionment Documentation for a Blended System***

| Surface Water Pathway Criteria List<br>Suspected Release | |
|---|---|
| Is surface water nearby? (y/n/u) | N |
| Is waste quantity particularly large? (y/n/u) | N |
| Is the drainage area large? (y/n/u) | N |
| Is rainfall heavy? (y/n/u) | N |
| Is the infiltration rate low? (y/n/u) | N |
| Are sources poorly contained or prone to runoff or flooding? (y/n/u) | N |
| Is a runoff route well defined(e.g.ditch/channel to surf.water)? (y/n/u) | Y |
| Is vegetation stressed along the probable runoff path? (y/n/u) | N |
| Are sediments or water unnaturally discolored? (y/n/u) | N |
| Is wildlife unnaturally absent? (y/n/u) | N |
| Has deposition of waste into surface water been observed? (y/n/u) | N |
| Is ground water discharge to surface water likely? (y/n/u) | N |
| Does analytical/circumstantial evidence suggest S.W. contam? (y/n/u) | N |
| Other criteria? (y/n) N | |
| SUSPECTED RELEASE? (y/n) | N |

Summarize the rationale for Suspected Release:

**Surface Water Pathway Criteria List**
**Primary Targets**

Is any target nearby? (y/n/u) If yes: Y
- N Drinking water intake
- Y Fishery
- Y Sensitive environment

Has any intake, fishery, or recreational area been closed? (y/n/u) N

Does analytical or circumstantial evidence suggest surface water contamination at or downstream of a target? (y/n/u) N

Does any target warrant sampling? (y/n/u) If yes: N
- N Drinking water intake
- N Fishery
- N Sensitive environment

Other criteria? (y/n) N

PRIMARY INTAKE(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Intakes:

continued -------

continued -------

Other criteria? (y/n) N

PRIMARY FISHERY(IES) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Fisheries:

Other criteria? (y/n) N

PRIMARY SENSITIVE ENVIRONMENT(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Sensitive Environments:

SURFACE WATER PATHWAY SCORESHEETS

| Pathway Characteristics | | Ref. |
|---|---|---|
| Do you suspect a release? (y/n) | No | |
| Distance to surface water (feet): | 2640 | |
| Flood frequency (years): | 100 | |
| What is the downstream distance (miles) to: | | |
| a. the nearest drinking water intake? | N.A. | |
| b. the nearest fishery? | 0.5 | |
| c. the nearest sensitive environment? | 1.9 | |

| LIKELIHOOD OF RELEASE | Suspected Release | No Suspected Release | References |
|---|---|---|---|
| 1. SUSPECTED RELEASE | 0 | | |
| 2. NO SUSPECTED RELEASE | | 400 | |
| LR = | 0 | 400 | |

Drinking Water Threat Targets

| TARGETS | Suspected Release | No Suspected Release | References |
|---|---|---|---|
| 3. Determine the water body type, flow (if applicable), and number of people served by each drinking water intake. | | | |
| 4. PRIMARY TARGET POPULATION 0 person(s) | 0 | | |
| 5. SECONDARY TARGET POPULATION Are any intakes part of a blended system? (y/n): N | 0 | 0 | |
| 6. NEAREST INTAKE | 0 | 0 | |
| 7. RESOURCES | 0 | 5 | |
| T = | 0 | 5 | |

Drinking Water Threat Target Populations

| Intake Name | Primary (y/n) | Water Body Type/Flow | Population Served | Ref. | Value |
|---|---|---|---|---|---|
| None | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | |
|---|---|
| Total Primary Target Population Value | 0 |
| Total Secondary Target Population Value | 0 |

*** Note : Maximum of 6 Intakes Are Printed ***

***Apportionment Documentation for a Blended System***

Human Food Chain Threat Targets

| TARGETS | Suspected Release | No Suspected Release | References |
|---|---|---|---|
| 8. Determine the water body type and flow for each fishery within the target limit. | | | |
| 9. PRIMARY FISHERIES | 0 | | |
| 10. SECONDARY FISHERIES | 0 | 12 | |
| T = | 0 | 12 | |

Human Food Chain Threat Targets

| Fishery Name | Primary (y/n) | Water Body Type/Flow | Ref. | Value |
|---|---|---|---|---|
| 1 PASSAIC RIVER | N | Coastal,ocean,Gr.Lake | | 12 |
| 2 NEWARK BAY | N | Coastal,ocean,Gr.Lake | | 12 |
| 3 ARTHUR KILL | N | Coastal,ocean,Gr.Lake | | 12 |
| 4 KILL VAN KULL | N | Coastal,ocean,Gr.Lake | | 12 |
| 5 THE NARROWS | N | Coastal,ocean,Gr.Lake | | 12 |
| | | | | |
| | | Total Primary Fisheries Value | | 0 |
| | | Total Secondary Fisheries Value | | 0 |

*** Note : Maximum of 6 Fisheries Are Printed ***

Environmental Threat Targets

| TARGETS | Suspected Release | No Suspected Release | References |
|---|---|---|---|
| 11. Determine the water body type and flow (if applicable) for each sensitive environment. | | | |
| 12. PRIMARY SENSITIVE ENVIRONMENTS | 0 | | |
| 13. SECONDARY SENSITIVE ENVIRONS. | 0 | 10 | |
| T = | 0 | 10 | |

Environmental Threat Targets

| Sensitive Environment Name | Primary (y/n) | Water Body Type/Flow | Ref. | Value |
|---|---|---|---|---|
| 1 ESTUARINE WETLANDS | N | Coastal,ocean,Gr.Lake | | 0 |
| 2 STATE-LISTED ENDANGERED | N | Coastal,ocean,Gr.Lake | | 0 |
| 3 STATE DESIGNATED AREAS | N | Coastal,ocean,Gr.Lake | | 0 |
| | | | | |
| | | | | |
| | | | | |

Total Primary Sensitive Environments Value 0
Total Secondary Sensitive Environments Value 0

*** Note: Maximum of 6 Sensitive Environments Are Printed ***

Surface Water Pathway Threat Scores

| Threat | Likelihood of Release(LR) Score | Targets(T) Score | Pathway Waste Characteristics (WC) Score | Threat Score LR x T x WC / 82,500 |
|---|---|---|---|---|
| Drinking Water | 400 | 5 | 18 | 0 |
| Human Food Chain | 400 | 12 | 18 | 1 |
| Environmental | 400 | 10 | 18 | 1 |

| SURFACE WATER PATHWAY SCORE: | 2 |
|---|---|

## Soil Exposure Pathway Criteria List
## Resident Population

| | |
|---|---|
| Is any residence, school, or daycare facility on or within 200 feet of an area of suspected contamination? (y/n/u) | N |
| Is any residence, school, or daycare facility located on adjacent land previously owned or leased by the site owner/operator? (y/n/u) | N |
| Is there a migration route that might spread hazardous substances near residences, schools, or daycare facilities? (y/n/u) | N |
| Have onsite or adjacent residents or students reported adverse health effects, exclusive of apparent drinking water or air contamination problems? (y/n/u) | N |
| Does any neighboring property warrant sampling? (y/n/u) | N |
| Other criteria? (y/n) | N |
| RESIDENT POPULATION IDENTIFIED? (y/n) | N |

Summarize the rationale for Resident Population:

## SOIL EXPOSURE PATHWAY SCORESHEETS

| Pathway Characteristics | | Ref. |
|---|---|---|
| Do any people live on or within 200 ft of areas of suspected contamination? (y/n) | No | |
| Do any people attend school or daycare on or within 200 ft of areas of suspected contamination? (y/n) | No | |
| Is the facility active? (y/n): | Yes | |

| LIKELIHOOD OF EXPOSURE | Suspected Contamination | References |
|---|---|---|
| 1. SUSPECTED CONTAMINATION LE = | 550 | |

Targets

| | | |
|---|---|---|
| 2. RESIDENT POPULATION<br>0 resident(s)<br>0 school/daycare student(s) | 0 | |
| 3. RESIDENT INDIVIDUAL | 0 | |
| 4. WORKERS<br>1 - 100 | 5 | |
| 5. TERRES. SENSITIVE ENVIRONMENTS | 0 | |
| 6. RESOURCES | 5 | |
| T = | 10 | |

WASTE CHARACTERISTICS

WC = 18

RESIDENT POPULATION THREAT SCORE: 1

NEARBY POPULATION THREAT SCORE: 2

Population Within 1 Mile: 10,001 - 50,000

SOIL EXPOSURE PATHWAY SCORE: 3

Soil Exposure Pathway Terrestrial Sensitive Environments

| Terrestrial Sensitive Environment Name | Reference | Value |
|---|---|---|
| 1 NONE | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Total Terrestrial Sensitive Environments Value | | |

*** Note : Maximum of 7 Sensitive Environments Are Printed ***

## Air Pathway Criteria List
## Suspected Release

| | |
|---|---|
| Are odors currently reported? (y/n/u) | N |
| Has release of a hazardous substance to the air been directly observed? (y/n/u) | N |
| Are there reports of adverse health effects (e.g., headaches, nausea, dizziness) potentially resulting from migration of hazardous substances through the air? (y/n/u) | N |
| Does analytical/circumstantial evidence suggest release to air? (y/n/u) | N |
| Other criteria? (y/n) N | |
| SUSPECTED RELEASE? (y/n) | N |

Summarize the rationale for Suspected Release:

AIR PATHWAY SCORESHEETS

Pathway Characteristics

| | | Ref. |
|---|---|---|
| Do you suspect a release? (y/n) | No | |
| Distance to the nearest individual (feet): | 0 | |

| LIKELIHOOD OF RELEASE | Suspected Release | No Suspected Release | References |
|---|---|---|---|
| 1. SUSPECTED RELEASE | 0 | | |
| 2. NO SUSPECTED RELEASE | | 500 | |
| LR = | 0 | 500 | |

Targets

| TARGETS | Suspected Release | No Suspected Release | References |
|---|---|---|---|
| 3. PRIMARY TARGET POPULATION 0 person(s) | 0 | | |
| 4. SECONDARY TARGET POPULATION | 0 | 111 | |
| 5. NEAREST INDIVIDUAL | 0 | 20 | |
| 6. PRIMARY SENSITIVE ENVIRONS. | 0 | | |
| 7. SECONDARY SENSITIVE ENVIRONS. | 0 | 0 | |
| 8. RESOURCES | 0 | 5 | |
| T = | 0 | 136 | |

WASTE CHARACTERISTICS

| | | |
|---|---|---|
| WC = | 0 | 18 |

| | |
|---|---|
| AIR PATHWAY SCORE: | 15 |

Air Pathway Secondary Target Populations

| Distance Categories | Population | References | Value |
|---|---|---|---|
| Onsite | 99 | | 5 |
| Greater than 0 to 1/4 mile | 70 | | 1 |
| Greater than 1/4 to 1/2 mile | 2640 | | 9 |
| Greater than 1/2 to 1 mile | 8410 | | 8 |
| Greater than 1 to 2 miles | 43830 | | 27 |
| Greater than 2 to 3 miles | 133560 | | 38 |
| Greater than 3 to 4 miles | 231820 | | 23 |
| | Total Secondary Population Value | | 111 |

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Air Pathway Primary Sensitive Environments

| Sensitive Environment Name | Reference | Value |
|---|---|---|
| None | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Total Primary Sensitive Environments Value | | |

*** Note : Maximum of 7 Sensitive Environments Are Printed***

Air Pathway Secondary Sensitive Environments

| Sensitive Environment Name | Distance | Reference | Value |
|---|---|---|---|
| 1 WETLANDS | >1/4-1/2 | | 0.1 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Total Secondary Sensitive Environments Value | | | 0 |

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| SITE SCORE CALCULATION | SCORE |
|---|---|
| GROUND WATER PATHWAY SCORE: | 1 |
| SURFACE WATER PATHWAY SCORE: | 2 |
| SOIL EXPOSURE PATHWAY SCORE: | 3 |
| AIR PATHWAY SCORE: | 15 |
| SITE SCORE: | 8 |

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SUMMARY

1. Is there a high possibility of a threat to any nearby drinking water well(s) by migration of a hazardous substance in ground water? No

   If yes, identify the well(s).

   If yes, how many people are served by the threatened well(s)? 0

2. Is there a high possibility of a threat to any of the following by hazardous substance migration in surface water?
   A. Drinking water intake No
   B. Fishery No
   C. Sensitive environment (wetland, critical habitat, others) No

   If yes, identity the target(s).

3. Is there a high possibility of an area of surficial contamination within 200 feet of any residence, school, or daycare facility? No

   If yes, identify the properties and estimate the associated population(s)

4. Are there public health concerns at this site that are not addressed by PA scoring considerations? No

   If yes, explain:

***REFERENCE LIST***